Amendments to the Claims:

Please amend claims 27 and 40 and cancel claim 39. This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-26 (canceled)

27 (currently amended) A method for detecting translation of ~~a polynucleotide~~ an mRNA comprising the steps of:

a) providing a substrate for use in desorption spectrometry, wherein the substrate comprises a surface and an adsorbent attached to the surface;

b) providing ~~a polynucleotide~~ an mRNA encoding a polypeptide and reagents for in vitro translation of the ~~polynucleotide~~ mRNA;

c) translating the ~~polynucleotide~~ mRNA *in situ* on the ~~adsorbent~~ substrate, whereby the polypeptide is produced and is ~~docked~~ bound through the adsorbent to the substrate;

d) exposing the substrate to an eluant to wash off unbound material and to allow retention of the polypeptide by the adsorbent; and

e) detecting retained polypeptide by desorption spectrometry;

whereby detection of the polypeptide provides detection of translation of the ~~polynucleotide~~ mRNA.

28-35 (canceled)

36 (previously presented): The method of claim 27 wherein the adsorbent specifically binds the polypeptide.

37 (previously presented): The method of claim 36 wherein the adsorbent comprises an antibody.

38 (previously presented): The method of claim 27 wherein the adsorbent is a hydrophilic interaction adsorbent, a hydrophobic interaction adsorbent, a metal chelate adsorbent, an anionic adsorbent or a cationic adsorbent.

39 (canceled).

40 (currently amended): The method of claim **[[39]]** **27** wherein step (b) further comprises providing reagents for in vitro transcription of the mRNA.

41 (previously presented): The method of claim 27 wherein the polynucleotide is comprised in a genetic package.

42 (previously presented): The method of claim 27 wherein the genetic package is a bacteriophage.

43 (previously presented): The method of claim 27 wherein step (c) comprises creating a well over the substrate with the adsorbent at a bottom of the well and placing the reagents and the polynucleotide in the well.

44 (previously presented): The method of any of claims 27 and 36-43 wherein the substrate is a mass spectrometry probe and desorption spectrometry comprises laser desorption mass spectrometry.